



# 2023 Summer Reliability Forum

May 3, 2023



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# CEI South's Electric Footprint



• **Customers** ~150,000

• **2021 Retail Sales 4,645 (GWh)**

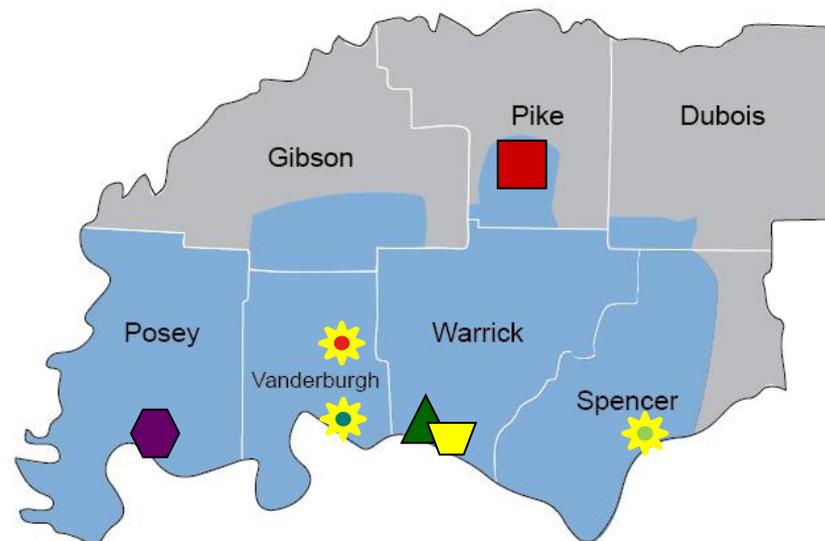
- Residential 1,417 GWh
- Commercial 1,165 GWh
- Industrial 2,041 GWh
- Other 22 GWh

• **Transmission System**

- 1,004 miles of transmission lines
- 33 transmission substations

• **Distribution System**

- More than 4,362 circuit miles of distribution lines
- 29% of distribution underground
- 78 distribution substations



Power plants<sup>[1]</sup>

- AB Brown
- FB Culley
- Warrick Unit 4
- Blackfoot Clean Energy Plant
- Troy Solar
- Oakhill Solar
- Volkman Rd Solar

<sup>[1]</sup>Fowler Ridge & Benton County Wind Farms not shown

# Generation Fleet Overview

## Installed Capacity



- **Coal Units – 1,027 MW**

- AB Brown Units 1 and 2 – 485 MW [1]
- FB Culley Units 2 and 3 – 360 MW[2]
- Warrick Unit 4 – 150 MWs out of 300 MW [3]
- Ohio Valley Electric Cooperative (OVEC) – 32 MW



- **Gas Peaking Units – 160 MW**

- AB Brown Units 3 and 4 – 160 MW

- **Renewables – 136 MW**

- Troy Solar – 50 MW
- Volkman Road Solar – 2 MW
  - Includes 1 MW/4 MWhr Battery
- Evansville Urban Solar – 2 MW
- Blackfoot Landfill Gas – 2 MW
- Fowler Ridge Wind PPA – 50 MW
- Benton County Wind PPA – 30 MW

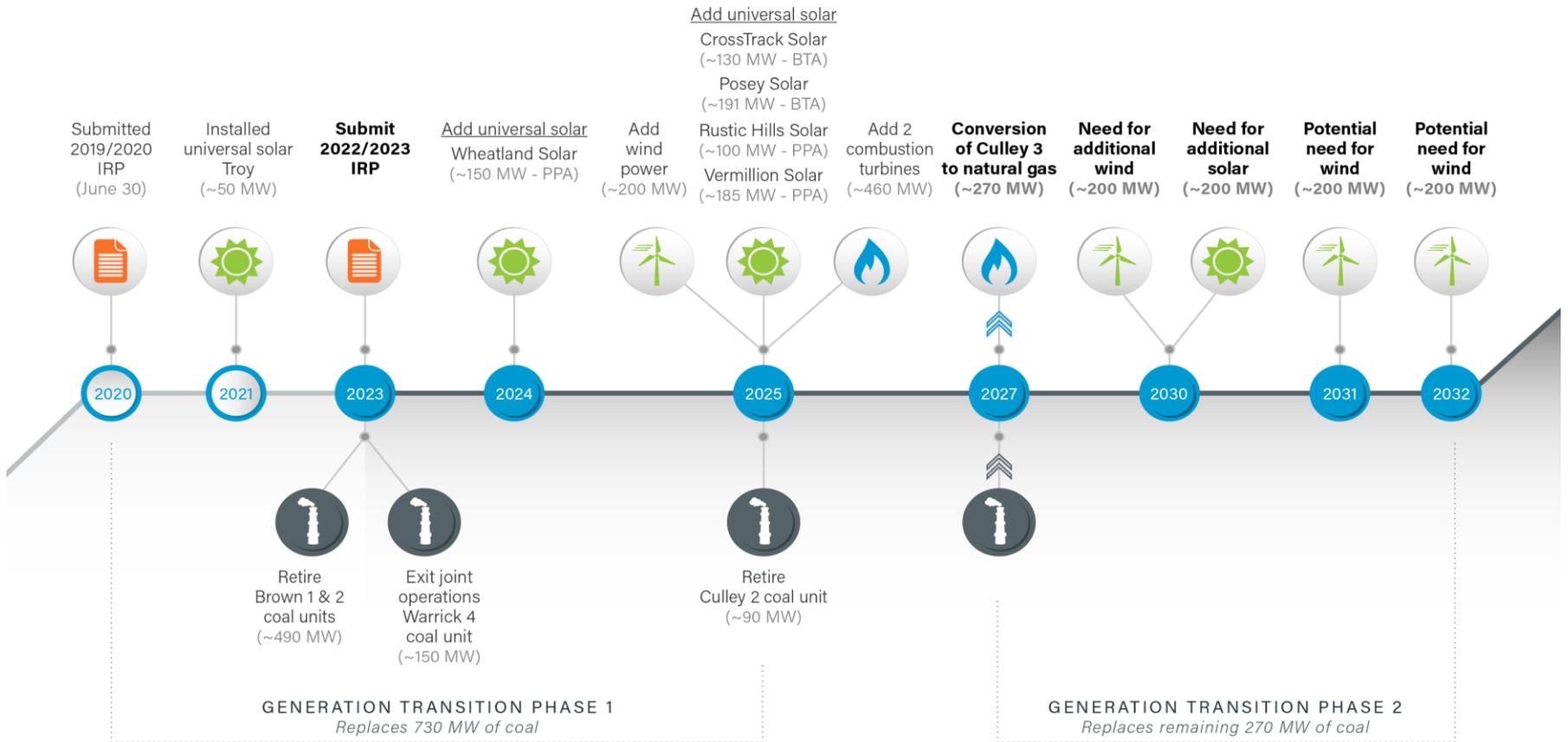


[1] AB Brown Units 1 and 2 are scheduled to retire on Oct 15, 2023

[2] FB Culley Unit 3 returned to service from June 2022 forced outage on March 12, 2023

[3] CEI South plans to exit joint ownership of Warrick 4 on Dec 31, 2023

# Update on Generation Transition



IRP = Integrated Resource Plan  
MW = Megawatt

BTA = Build Transfer Agreement/Utility Ownership  
PPA = Power Purchase Agreement

# Generation – Summer Reliability Preparedness

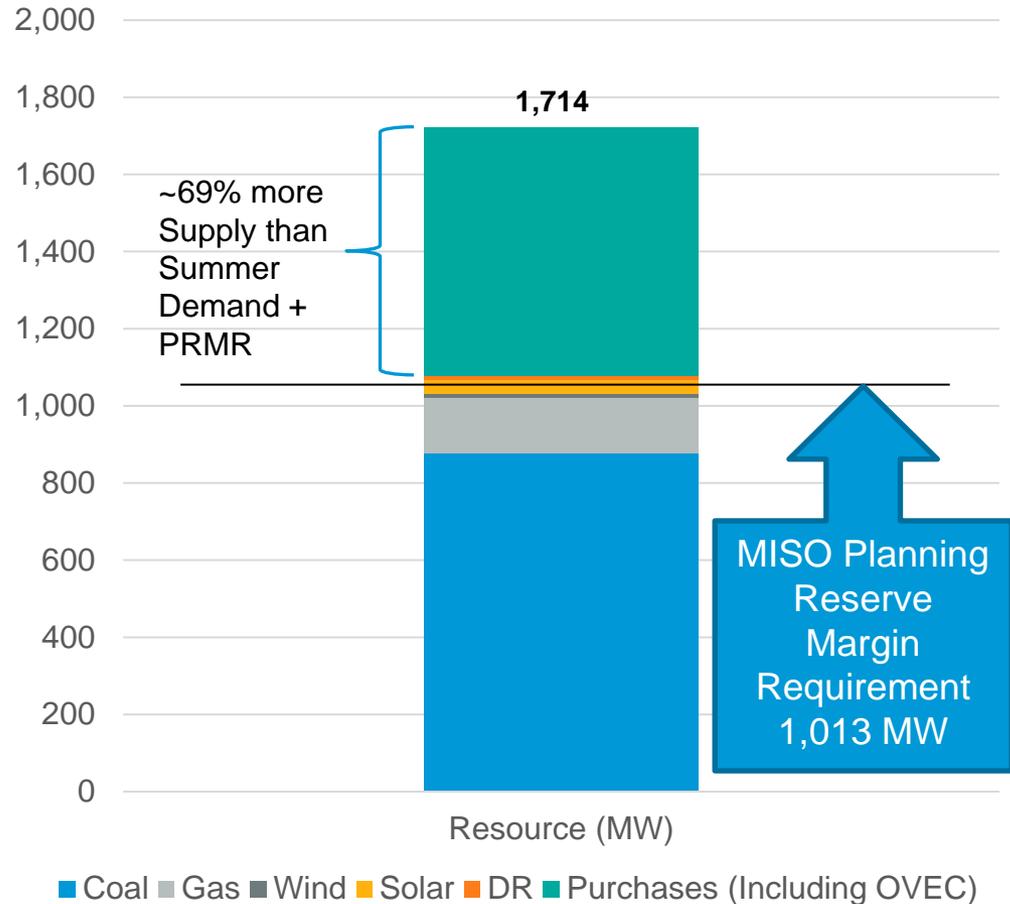


- Preparing units for summer reliability
  - Year-round preventive and predictive maintenance program
  - Proactively monitoring equipment trends
  - Maintenance outages have been completed in preparation for summer
  - Ensure chemicals and reagents inventory is adequate and deliveries are scheduled to maintain environmental compliance
  - Extreme Summer Weather (MISO emergency conditions) – “hands off” approach
- Fuel supply
  - Coal pile inventory at CEI South’s generating stations has 60 days of operation.
  - Coal supplier is operating with no restrictions and has stored inventory at the mine.
  - Coal transportation contracts are in place

# CEI South Accredited Capacity Resources for 2023 – 2024 Summer Season



- **MISO Accredited Capacity:**  
1,714 MW
- **CEI South Accredited Capacity:** 1,058 MW
  - Coal – 877 MW
  - Natural Gas – 144 MW
  - Troy Solar – 37 MW
- **Other Accredited Capacity:**  
656 MW
  - Wind Purchases – 8 MW
  - OVEC – 29 MW
  - Summer Cycler – 4 MW
  - Bilateral Capacity Purchases – 615 MW<sup>[1]</sup>
- **Behind the Meter Capacity:**  
5 MW
  - Blackfoot Renewable Gas – 3 MW
  - Volkman Road Solar (BTM) – 1 MW
  - Evansville Urban Solar (BTM) – 1 MW

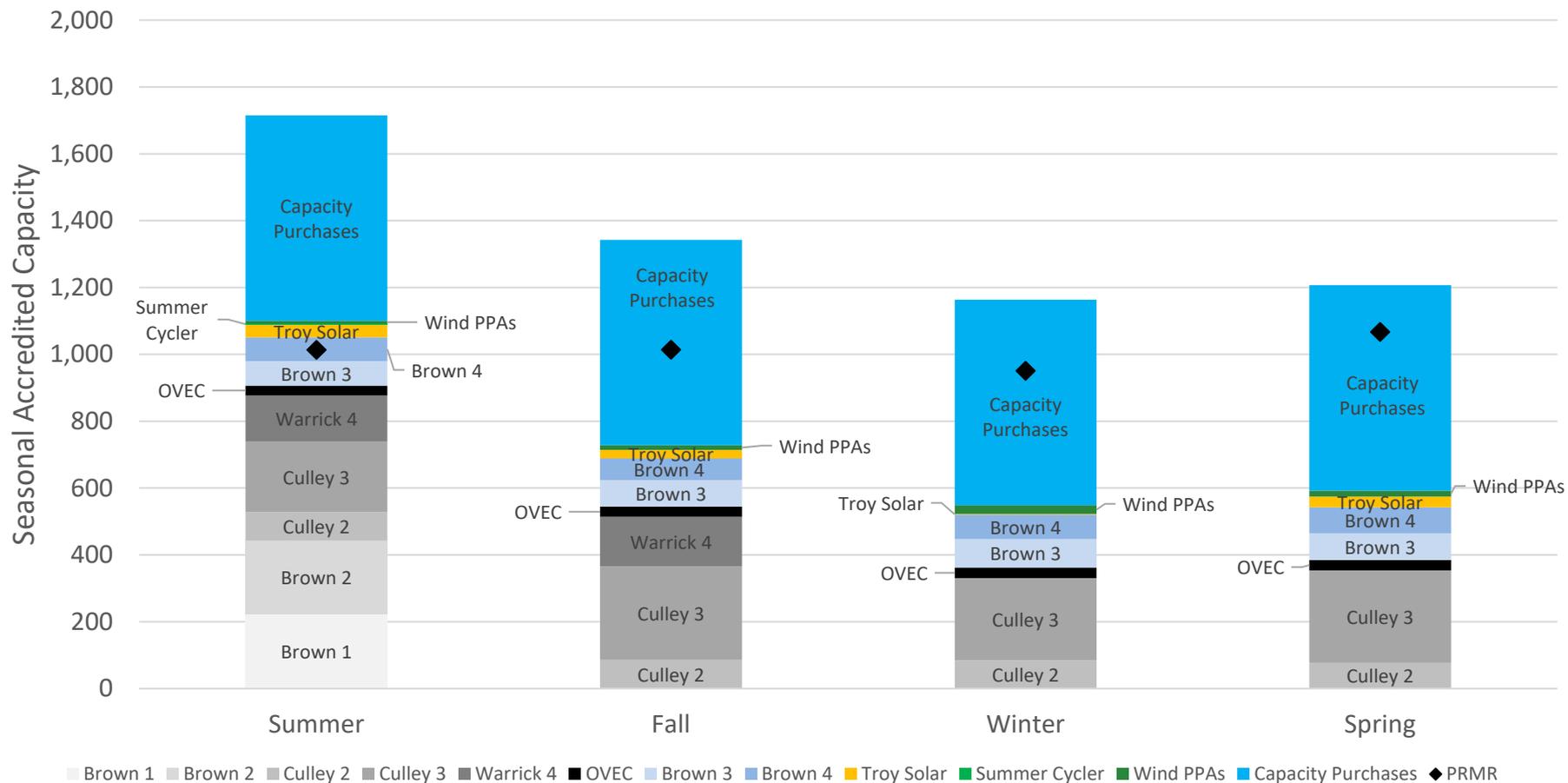


<sup>[1]</sup> Bilateral capacity contracts were secured prior to MISO's seasonal construct because ABB 1 & 2 and Alcoa W4 capacity would not have been accounted for with MISO's annual accreditation.

# CEI South's 2023-2024 Seasonal PRMR and Resources



2023-2024 Seasonal PRMR and Resources



# Closely Monitored MISO Activities



## Market Redefinition

CEI South remains supportive of MISO's market enhancements to ensure continued reliability and value in anticipation of the changing resource mix, more extreme weather events, and increasing electrification at a reasonable cost for ratepayers

## Interconnection Queue

CEI South supports MISO's interconnection process reforms aimed at expediting interconnection queue timelines and procedures that will help its members provide a cost-effective well-balanced energy mix.

## Implementation of FERC Orders

CEI South continues to engage with MISO through stakeholder meetings as well as the IURC where applicable on Orders 881 and 2222, while anticipating FERC's response to MISO's compliance filings.

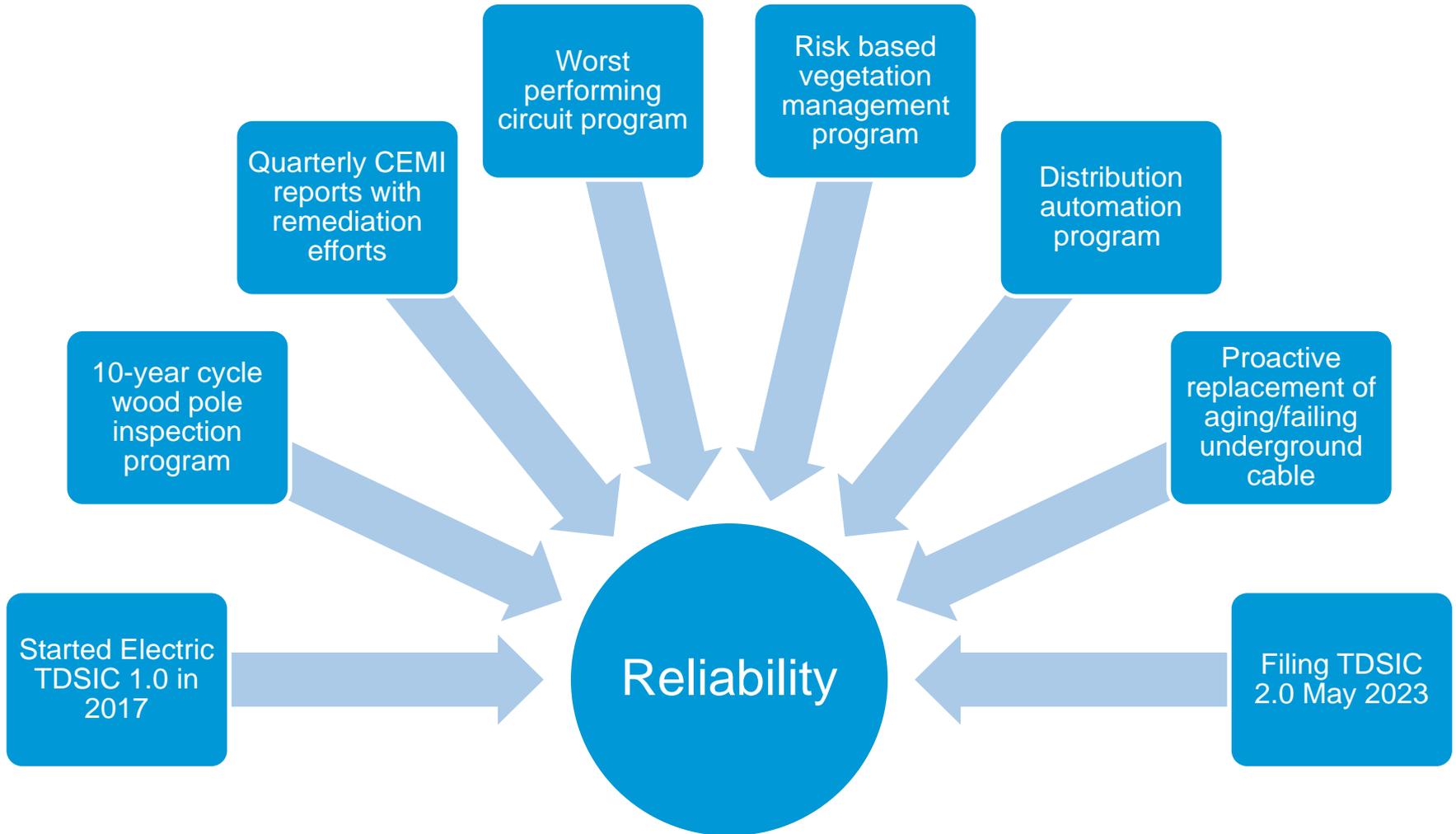
## Long Range Transmission Plan

CEI South continues to follow the LRTP stakeholder process and looks forward to further discussion regarding the development of the Tranche 2 Portfolio, which will continue to focus on the Midwest Subregion with projects identified for Southwestern Indiana and CEI South's footprint.

## Training & Drills

CEI South is committed to participating in MISO led simulation drills that focus on restoration and reliability. We participate in the Market Capacity Emergency Drill and the Power System Restoration Drill every year, as well as load shed drills once a month.

# Commitment to Customer Reliability – Notable Reliability Initiatives

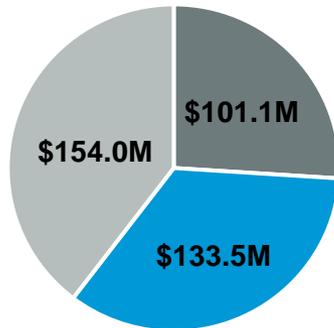


# TDSIC 1.0

## 2017-2022 TDSIC Investments

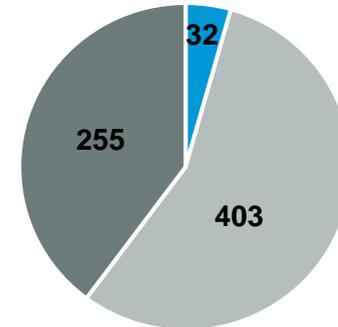


**\$388.6M Total Investment**



- Transmission
- Distribution
- Substation

**690 Projects Completed**



### Substation

### Distribution

### Transmission

135 Circuit Breakers Replaced

36 Power XFMR Replaced

51 SCADA Systems Upgraded

Other Replacements

- 290 Arrestors
- 173 Instrument XFMR

8,671 Structures Replaced/Installed

223.3 Miles OH Conductor Installed

124.1 Miles UG Conductor Installed

3,275 Distribution XFMR Replaced/Installed

94 Distribution Circuit Rebuild and Looping Projects Completed

2,637 Structures Replaced/Installed

75.6 Miles 69kV Rebuilt / New

163.2 Miles OPGW Installed

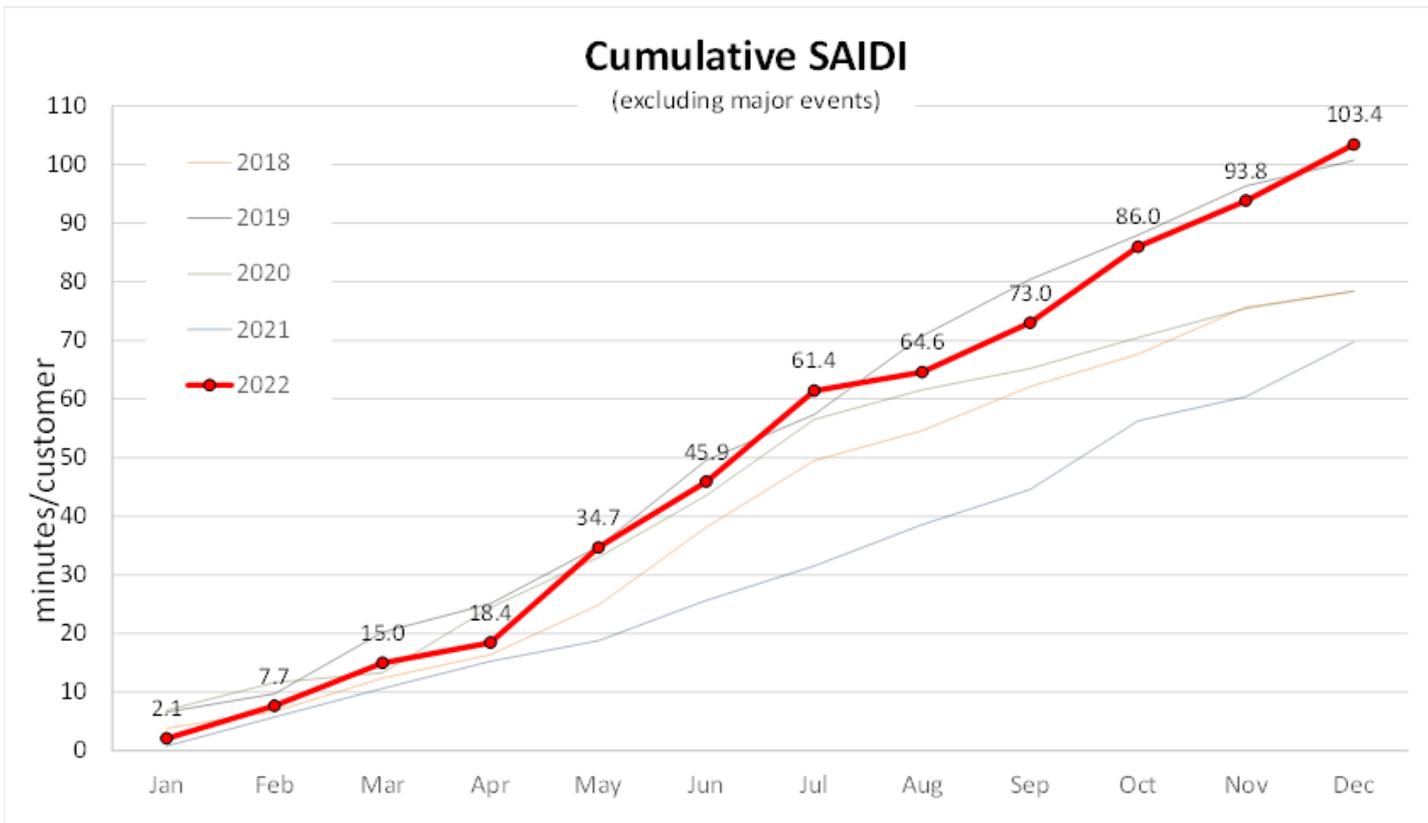
58 Miles 138kV Rebuilt / New

# Commitment to Customer Reliability – Metrics



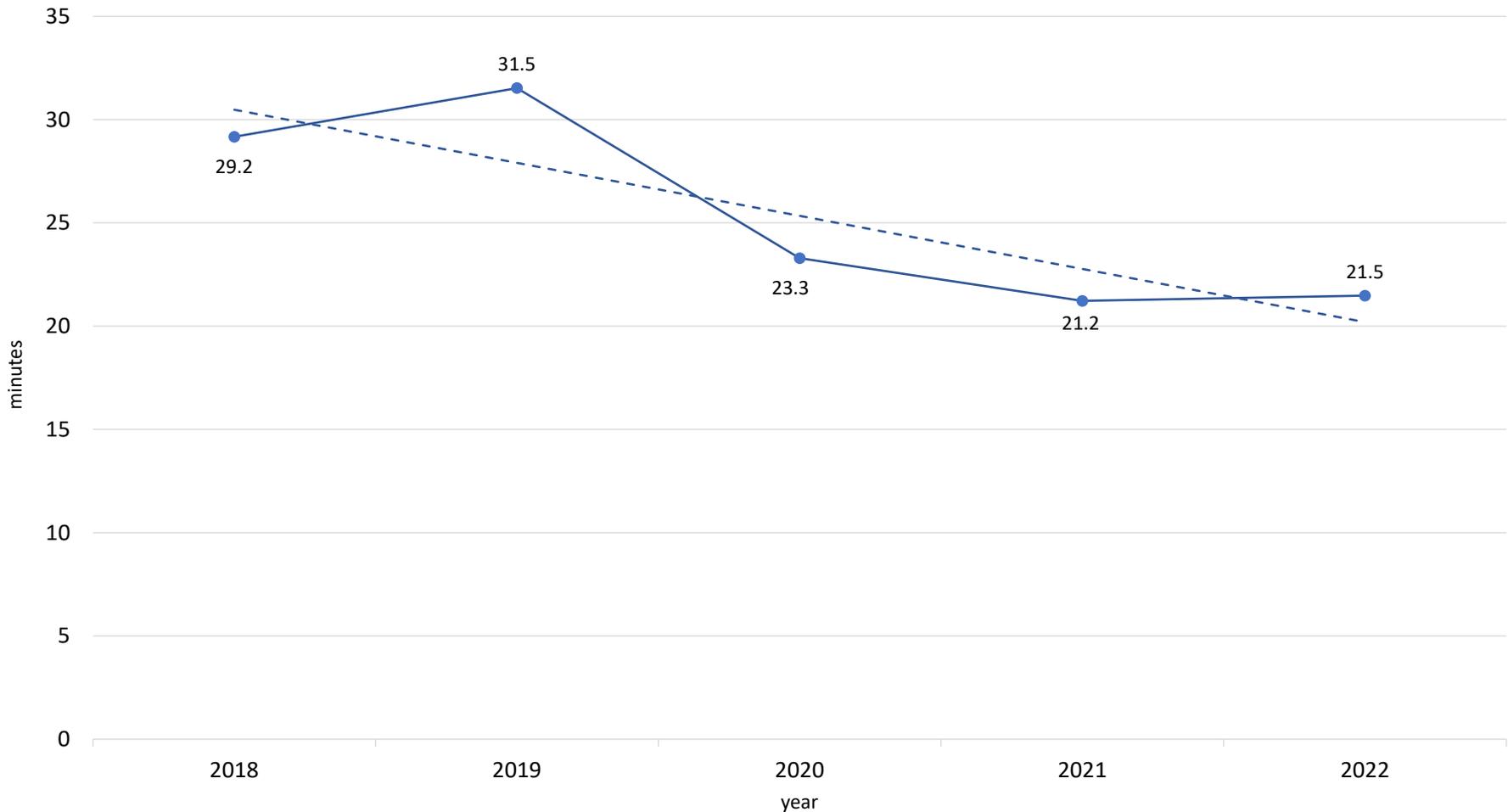
## End of Year 2022 – Reliability Metrics

- SAIDI 103.4 minutes/customer
- SAIFI 1.01 interruptions/customer
- CAIDI 102.1 minutes/interruption



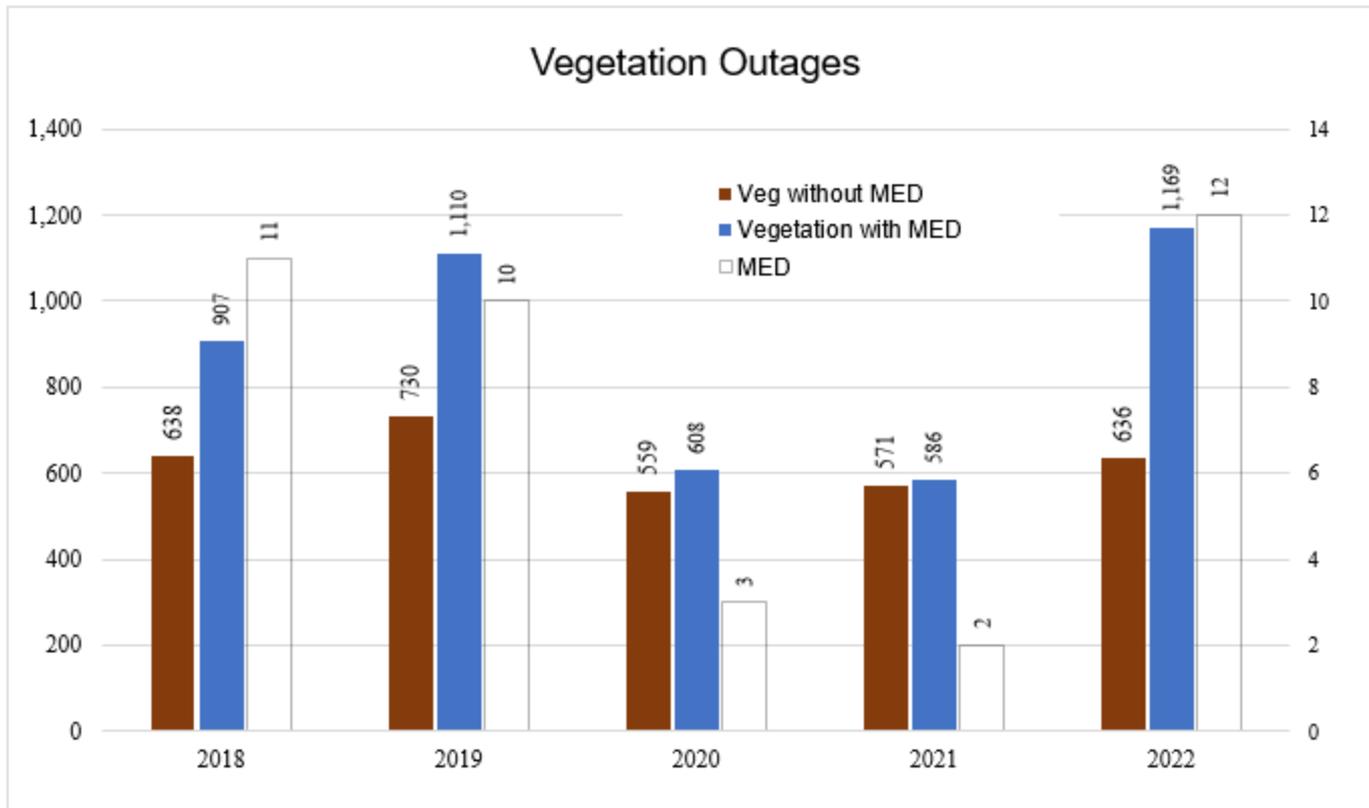
# Five-Year Equipment Failure Outages 2018-2022

Annual SAIDI Minutes from Equipment Failure  
excluding MEDs



# Vegetation Outages

- Vegetation Outages continue to correlate with storm events
- Excluding MEDs, outages caused by vegetation are trending down/remaining steady

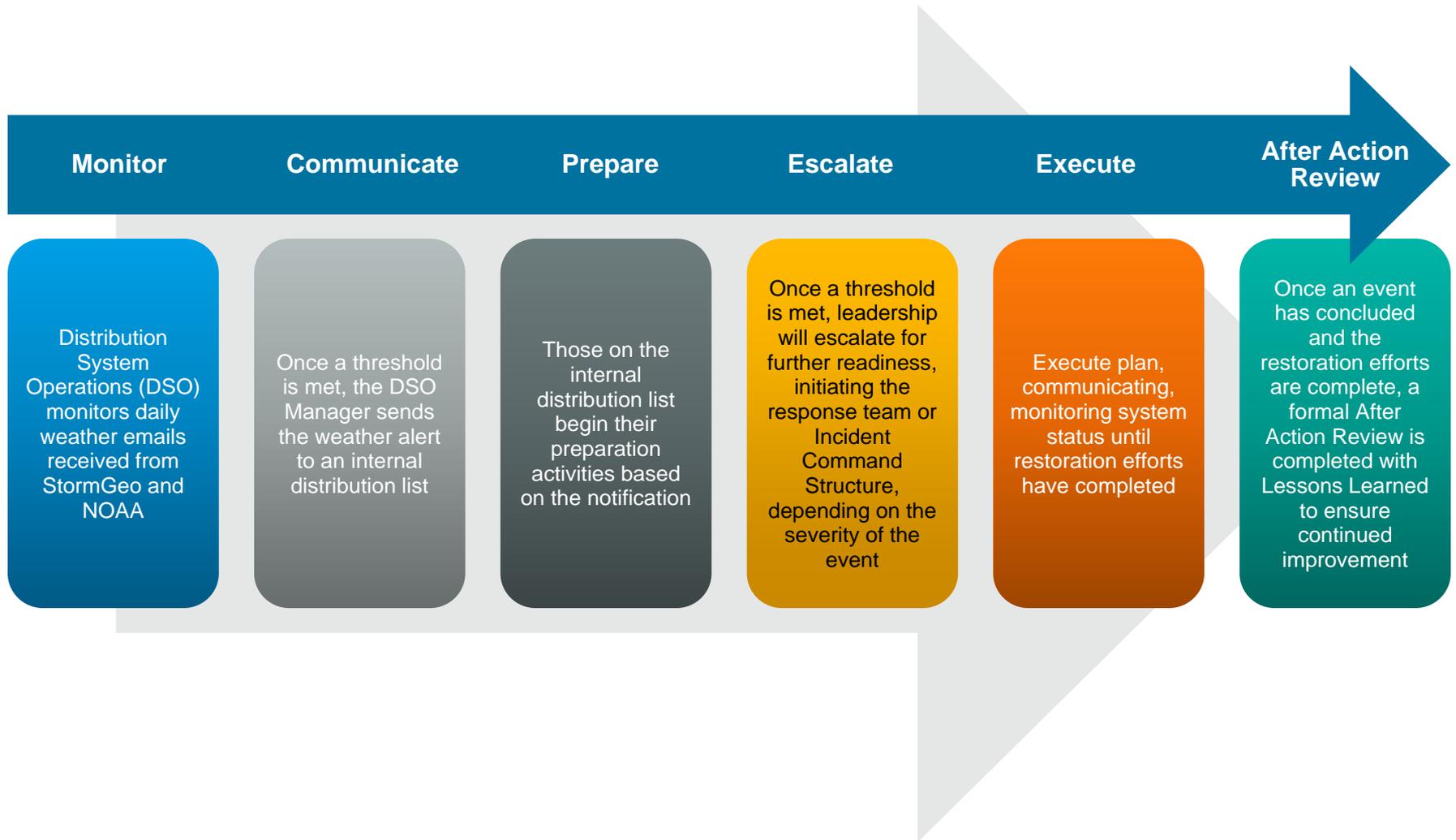


# Preparation For Severe Weather-Related Events



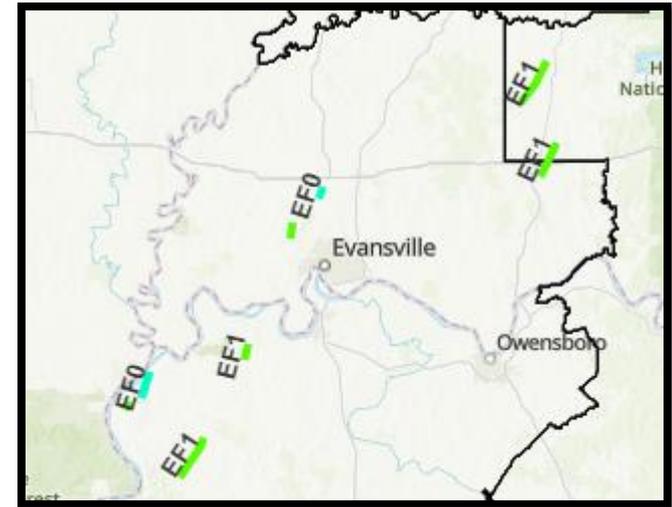
- CEI South electric field operations prepares for severe weather through annual drills such as Emergency Operations Plan (EOP) drills and Storm Response Plan drills
- Electric field operations has standing work orders that are automatically issued in the spring to be completed prior to the summer season
  - See Appendix for a list of activities completed
- Prior to a severe weather event, plans are executed to ensure planned outages are restored, providing maximum redundancy for the system
- Electric field operations keeps an inventory of spare equipment specifically for storm restoration efforts to provide assurance that equipment is available in time-sensitive situations
- Vehicles are stocked and maintained to ensure readiness
- Options identified in anticipation of need for additional materials (laydown yards, increased min/max levels, & agreements with vendors to get us emergency material)

# Timeline For Weather-Related Events



# High Winds & Severe Storms March 3, 2023

- Storm produced high winds, severe storms which produced multiple tornadoes
- 870+ tickets
  - 460+ outage tickets
  - 400+ investigations/repairs
- Total of 39,500+ customers out
  - 33,700+ on the first day
- We restored 28,000+ in the first 12 hours
- Last customer restored on 3/5



Source: [March 3, 2023 High Winds & Severe Storms \(weather.gov\)](https://www.weather.gov)



## Distribution



- Inspect capacitor banks
- Ensure maximum redundancy

## Transmission



- Ensure maximum redundancy

## Substation



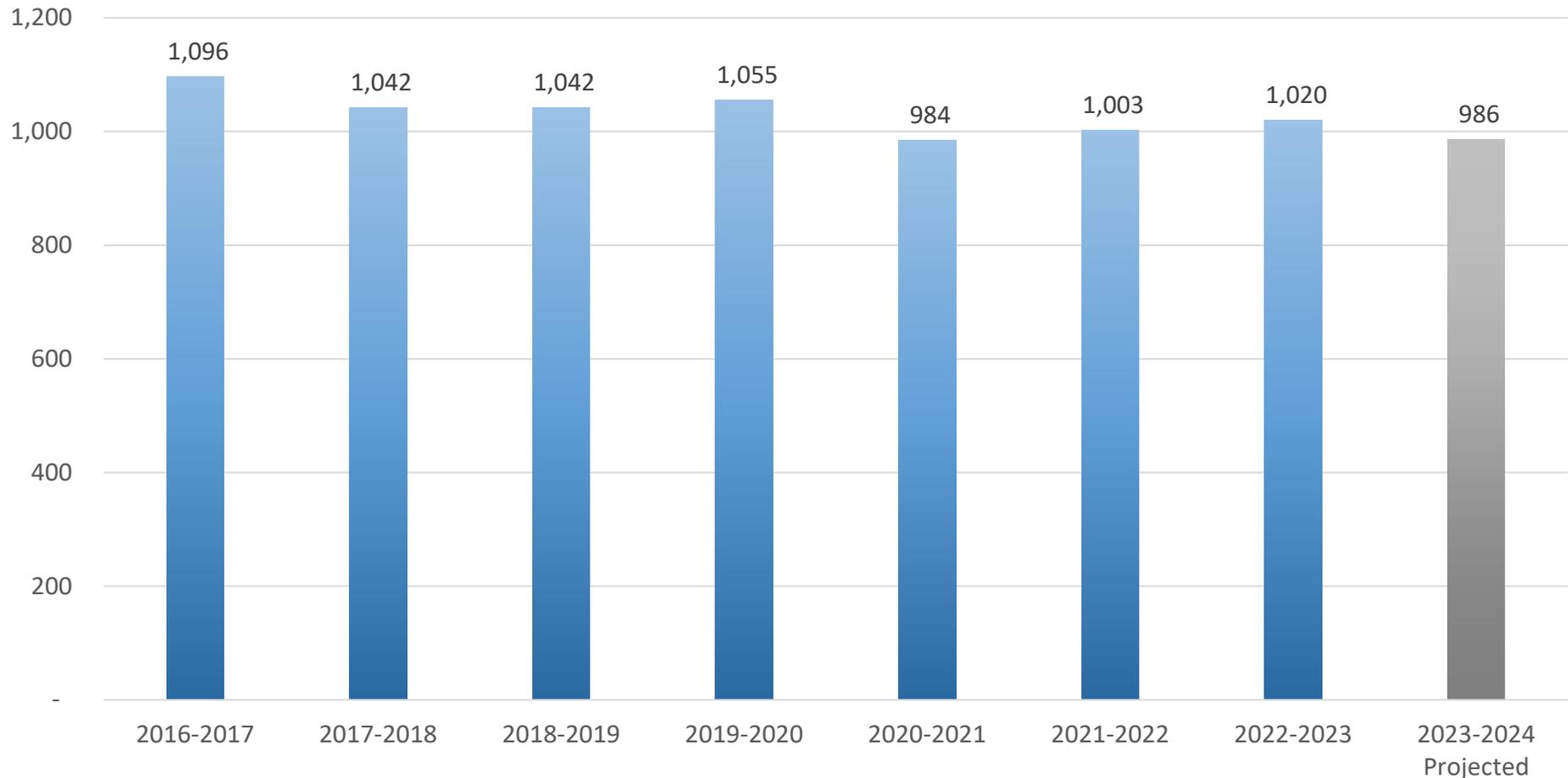
- Complete inspection work orders
- Gather load data during peak months

- Long lead time materials
  - Transformers
    - Procurement ensuring we have domestic and internationally sourced transformers
    - Operations working with domestic vendors on the potential for ad hoc purchases
    - Storeroom working with existing vendor to ship units for our immediate needs
- High demand, short supply
  - Wood Poles
    - Procurement and Operations working to diversify vendors
    - Revising material specs to allow the use of different species of poles and pole treatments across both CEIS and CenterPoint Energy Houston Electric
    - Investigating use of non-wood distribution pole materials (fiberglass, steel, ductile iron, etc.)
    - Goal is to ensure appropriate supply and maintain reasonable costs

- On January 4, 2023, the Commission issued the Financing Order (FO) in Cause No. 45722 authorizing CEI South to issue securitization bonds to cover an estimated \$360 million in qualified costs to securitize A.B. Brown coal units 1&2, which must cease operation by October 15, 2023
- CEI South has pursued diligently the marketing of Securitization Bonds, and efforts to date include but are not limited to the following:
  - Formed SIGECO Securitization 1, LLC
  - Prepared and Filed a registration statement on Form SF-1 with the Securities and Exchange Commission (SEC)
  - Drafted and revised transaction documents, including the servicing agreement
  - Responded timely to requests for information from credit rating agencies, Moody's Investors Service and S&P Global
  - Finalized selections of the lead underwriters for the securitization bond offering
- CEI South received a 90-day extension to manage various deal processes to preserve NPV savings benefits for customers

# APPENDIX

# CEI South's Historical<sup>[1]</sup> and Projected<sup>[2]</sup> Summer Peak Load (MW)



<sup>[1]</sup> Actual historical peak load value, not normalized peak load value

<sup>[2]</sup> June 2023 - August 2023

# CEI South's Resources at Summer Peak & PRM Requirement



## CEI South's Retail Summer Peak Demand & Requirements

Peak Demand	MW
CenterPoint Energy Retail	986
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Forecasted Coincident Peak	MW
CEI South	929
MISO PRM of 7.4%, Transmission line loss 1.6%	85
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<b>Total Requirements</b>	<b>1,014</b>

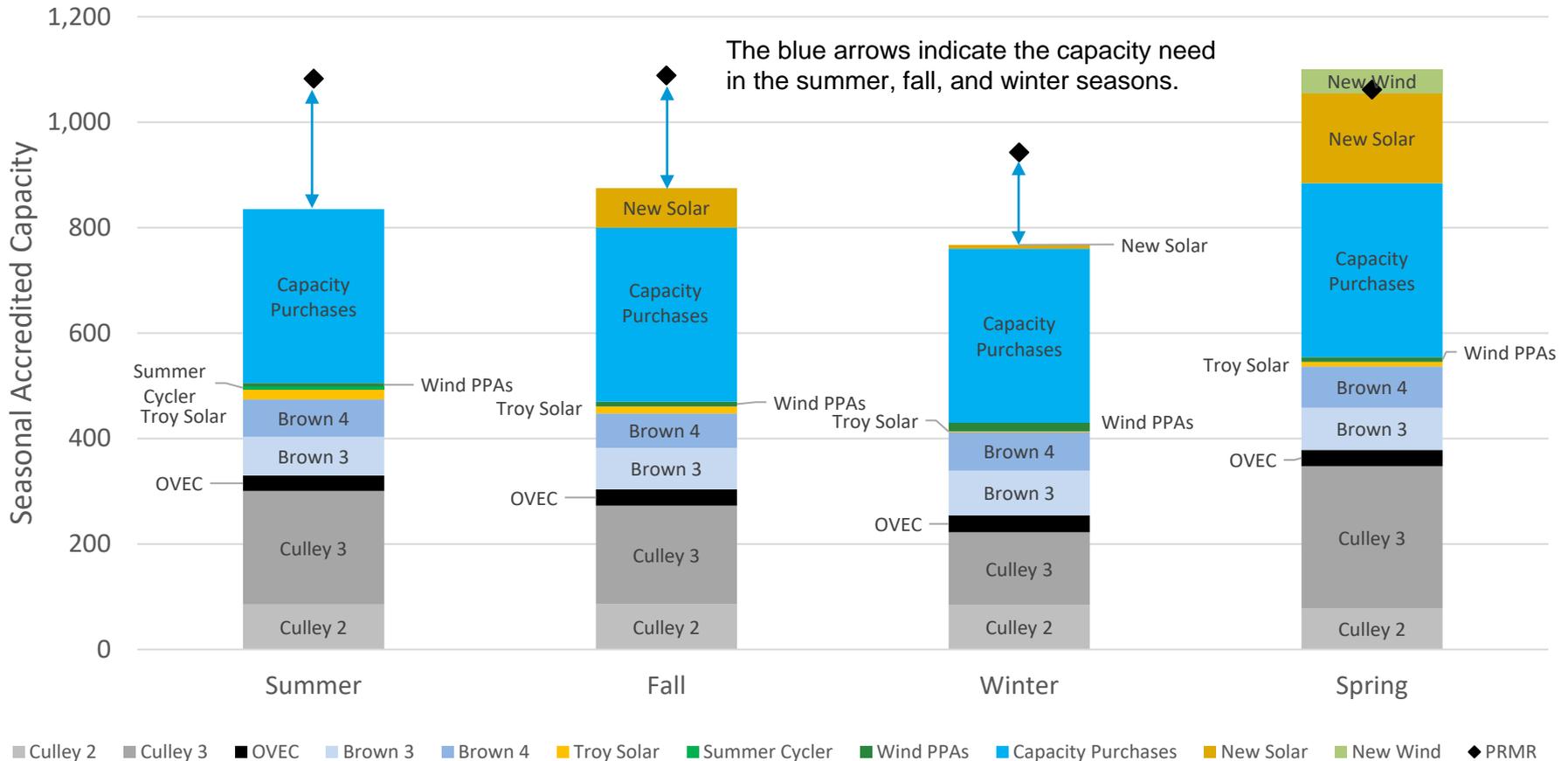
- Supply exceeds CEI South's Summer Retail Peak Demand by 729 MW (74%)
- Summer Supply exceeds Demand Requirement by 701 MW (69%)

Supply	
<b>Steam Generation</b>	<b>UCAP MW</b>
Brown 1	222.6
Brown 2	220.4
Culley 2	85.3
Culley 3	210.2
Warrick 4	138.7
Total Steam	877.2
<b>Peaking Generation</b>	
Brown 3	73.3
Brown 4	70.9
Total Peaking	144.2
<b>Purchases</b>	
Firm	29.4
Wind	8
Capacity Purchases	615
Total Purchase	652.4
<b>Solar</b>	
Troy Solar	37.1
Total Solar	37.1
<b>Demand Resource</b>	
Summer Cyclor	4.4
Total Other	4.4
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<b>Total MISO Accredited Capacity</b>	<b>1,715.30</b>

# CEI South's 2024-2025 Projected Seasonal PRMR and Resources



2024-2025 Seasonal PRMR and Resources



Note: 150 MWs of new solar expected to be available by the fall season with an addition 191 MWs available by the spring  
200 MWs of new wind expected to be available by the spring season

- Turn on AC units, replace thermostat batteries if applicable, replace filters, remove vent covers if applicable (all covered under our standing maintenance order)
- Turn on transformer fans for distribution transformers identified as heavily loaded during summer peak. List provided by DSO. (Done during routine sub inspections or during first bullet)
- Load readings taken during peak months. This activity includes Transmission and Distribution circuits and transformers. It also includes span hands on all LTC transformers and regulators. (This work charged to our standing maintenance WO)
- Temp readings taken, temp. span hands checked, and transformer fans operation checked during sub inspections on 4 month cycle (sub inspection WO)
- Complete substation yard infrared performed on 4 month cycle (sub inspection WO)
- Oil samples taken 2 times a year on transmission transformers and 1 time a year on distribution transformers (oil sample WO)

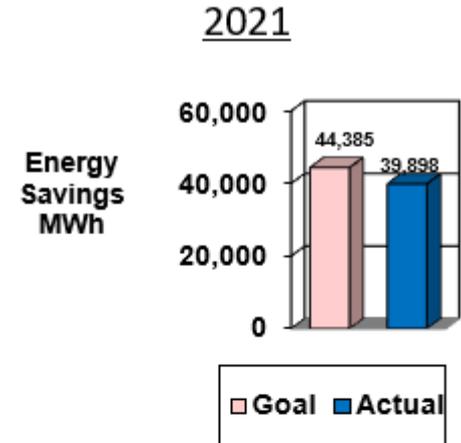
- CEIS' Load Management Program, as part of the Demand Side Management Program, includes
  - Direct Customer Load Control (Summer Cyclers)
    - Registered as Load Modifying Resource (LMR)
    - 2023-2024 Planning Year, effective June 1, 2023, is 4.0 MW
  - Interruptible Rates
    - Includes two customers that are designated as Load Management Measures (LMM)
    - Includes approximately 2MW

# CenterPoint 2020 & 2021/2022 Energy Efficiency Programs



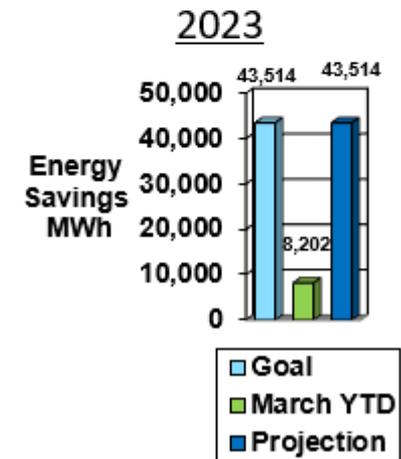
## 2021 Programs

- C&I Small Business, Residential Prescriptive, Residential Behavior and Residential New Construction were the top performing programs
- Achieved 90% of 2021 savings goal
  - Residential Programs achieved 99%
  - C&I Program achieved 83%
- Savings represents 1.12% of participating customer sales



## 2022/2023 Programs

- Residential Specialty Lighting and Residential Behavior and Small Business Direct Install are projected to provide the bulk of 2022 savings
- Currently projected to meet 90% of 2022 savings target of 36,911 MWh (gross), 2023 Plan target of 43,514 MWh (gross)
  - Savings goal represents 1.25% of participating customer sales.



# CenterPoint 2022/2023 Energy Efficiency Programs



## Residential Programs

- Residential Specialty Lighting
- \*Residential Prescriptive
- \*Income Qualified Weatherization
- Community Based – Specialty LED
- Appliance Recycling
- Bring your Own Thermostat
- Smart Cycle
- \*New Construction
- Conservation Voltage Reduction

## Commercial & Industrial (C&I) Programs

- C&I Prescriptive
- \*C&I Custom
- \*Small Business Energy Solutions
- Conservation Voltage Reduction

## CenterPoint annual energy savings

- 2021 (actual gross) – 39,898 MWh
- 2022 (projected gross) – 33,426 MWh
- 2023 (operating plan gross) – 43,514 MWh

\*Integrated CenterPoint Gas/Electric Program

CenterPoint Electric DSM Program Performance	
Program Year	Percent Goal Achieved
2017 (Evaluated)	111%
2018 (Evaluated)	120%
2019 (Evaluated)	115%
2020 (Evaluated)	115%
2021 (Evaluated)	90%

## CenterPoint DSM Assumptions in 2019 IRP Planning Process

- DSM savings levels in the load forecast include:
  - DSM energy efficiency programs available to all customer classes
  - Annual savings target of 1.25% of participating customer sales<sup>1</sup> for 2021 – 2023 and 0.75% annually thereafter

## CenterPoint DSM Planning Beyond 2023

- CenterPoint intends to extend the Market Potential Study in early 2022 to inform inputs into the 2022/2023 IRP.
  - Consistent with the 2019 IRP, DSM will be evaluated as a resource option in the IRP.
  - The inputs will include both energy efficiency and demand response elements

<sup>1</sup> Participating sales include all residential, all general service, and large customer sales that have not opted out of DSM Programs

# 2022 Foundation State Overview Indiana



Nearly  
**\$5.2 million**  
**CONTRIBUTED**

**138**  
**GRANTS**



## 2022 GRANT HIGHLIGHTS

**United Way of The Wabash Valley | \$107,000**  
Neighbors Helping Neighbors (*Community Vitality*)

**Camp Navigate | \$70,000**  
After-After School Care (*Education*)

**Imagination Library of Johnson County | \$35,000**  
Expansion of Program (*Education*)

- Community Vitality 56%
- Education 43%
- Local Initiative 1%



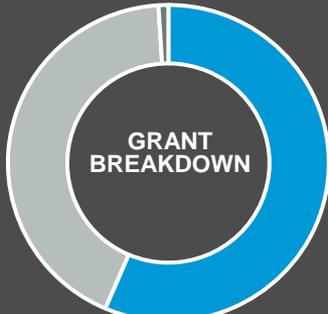
**13,500 +**  
**VOLUNTEER HOURS**  
Number of hours employees volunteered in 2022

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**1** employee **OLLAR** + **1** matching **OLLAR** = **2** twice the **IMPACT**

**\$187,000 +**  
**EASY MATCH**  
CenterPoint Energy Foundation matches employee contributions dollar-for-dollar to eligible 501(c)(3) nonprofit organizations

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**GRANT BREAKDOWN**